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PU030336

# Remarks/Arguments

Claims 1, 3, and 14-18 have been amended and claims 2, 9-13, and 19-23 have been cancelled.

## Claim Rejections - 35 USC 102

Claims 1, 2, 6, 8, 10, 12, 14-16, 18-20, and 22 are rejected as being anticipated by Inova et. al (US5136390).

### Amended claim 1

Applicants amend independent claim 1 to include the subject matter of original claim 2. As such, amended claim 1 is functionally identical to original claim 2 and should not warrant a new grounds for rejection.

Applicants assert that currently amended claim 1 (i.e., original claim 2) is not anticipated by Inova. Currently amended claim 1 includes, *inter alia*, that the image processor which is coupled to first and second projectors "adjusts said first and said second image portions according to a quadratic relationship."

Original claim 2 was rejected based on subject matter contained in Inova at col. 8, line 25. The cited subject matter in Inova is actually the following polynomial:

$$f(x) = \frac{16k - 5m}{v^2} x^2 + \frac{14m - 32k}{v^3} x^3 + \frac{16k - 8m}{v^4} x^4$$

Inova (col. 8, lines 21-39) explains each of the elements in this equation. "m is the maximum smoothing factor word value" which is selected to be 254. "k is the value of f(x) at the horizontal midpoint of the overlap region" and "v is the number of pixels in the overlap region." Further, "v and k can be adjusted to suit particular applications." From these

explanations and the fact that the left side of the equation is "f(x)," it is clear that "m," "k," and "v" are constants which are to be selected. (Note: if "m," "k," and "v," were considered variables for a given display arrangement, the left side of the equation would have been written as f(m, k, v, x).)

Additionally, Inova states that "x is the horizontal distance across the screen or image location" and "f(x) is the smoothing factor word value or brightness." As such, is clear that "f(x)" is a function of "x" and that "x" is the only variable in the subject equation, in that the "f(x)" will depend on the value of "x" which is a distance or linear dimension between two separate points where "f(x)" changes as a function of distance or linear dimension, i.e., as one moves across the overlap region. Because "x" is the only variable in the right side of the equation, the degree of the polynomial is determined based on the exponents of "x." It is well known in mathematics that a polynomial is characterized by "the term of highest degree" and that degree is defined as "the sum of the exponents of the variables in an algebraic term" (per Random House Webster's Unabridged Dictionary of 1998). Therefore, the polynomial referred to in the office action is a polynomial of the 4th degree, because "x" is the only variable, the third term has the largest exponent of "x," and the value of the largest exponent is 4.

In sharp contrast, Applicants' claimed invention in amended claim 1 (original claim 2) includes the feature of the processor adjusting "said first and second image portions according to a quadratic relationship." In mathematics, quadratic relationships involve "the square and no higher power of the unknown quantity; of the second degree" (per Random House Webster's Unabridged Dictionary of 1998). Therefore, Applicants' amended claim 1 (or original claim 2) is not anticipated by Inova, because (1) Inova discloses a fourth degree relationship, (2) Inova does not disclose a second degree relationship, and (3) Applicant's claimed relationship is specifically a second degree relationship.

#### Claims 6 and 8

Claims 6 and 8 which were rejected under 35 USC 102 depend on amended claim 1, and as such, dependent claims 6 and 8 include the subject matter of claim 1. In light of the assertions that Applicants advanced above regarding patentability of amended claim 1, claims 6 and 8 are also believed to be patentable.

Reconsideration of claims 1, 6, and 8 is respectfully requested.

## Claims 10 and 12

Because original claims 10 and 12 have been cancelled, the rejection to them is now moot.

### Amended claim 14

Applicants amend independent claim 14 to include content of original claim 21, but not the intervening subject matter in claim 16. More particularly, amended claim 14 now includes the step of "adjusting the brightness of said first and second image portions in accordance with the linearly inverse relationships:

$$x1 = \left(\left(\frac{j}{overlap}\right)\right)^{1/gamma} x2 = \left(\left(1 - \frac{j}{overlap}\right)\right)^{1/gamma},$$

Because the above relationships are not disclosed in the cited reference and the office action indicated that claim 21 is patentable if rewritten in independent form, Applicants assert that independent claim 14 is patentable over Inova.

In light of the above, Applicants request reconsideration of claim 14.

## Claims 15, 16 and 18

Claims 15, 16 and 18 which were rejected under 35 USC 102 depend on amended claim 14, and as such, dependent claims 15, 16 and 18 include the subject matter of amended claim 14. Therefore, in light of the assertions that Applicants advanced above regarding patentability of amended claims 14, dependent claims 15-16 and 18 are also believed to be patentable.

Reconsideration of claims 15-16 and 18 is respectfully requested.

#### Claims 19-20 and 22

Because claims 19-20 and 22 have been cancelled, the rejection to them is now moot.

## Claim Rejections - 35 USC 103

Claims 4, 5, 7 and 17 are rejected as being unpatentable over Inova (US5136390) in view of Johnson (US4827334).

### Claims 4, 5, and 7

Claims 4, 5, and 7 which were rejected under 35 USC 103 depend on amended claim 1, and as such, dependent claims 4, 5 and 7 include the subject matter of claim 1. Therefore, in light of the assertions that Applicants advanced above regarding patentability of amended claim 1, claims 4, 5, and 7 are also believed to be patentable.

In light of the above, reconsideration of claims 4, 5 and 7 is requested.

#### Claim 17

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Claim 17 which was rejected under 35 USC 103 depends on amended claim 14, and as such, dependent claim 17 includes the subject matter of claim 14. Therefore, in light of the assertions that Applicants advanced above regarding patentability of amended claim 14, claim 17 is also believed to be patentable.

Reconsideration of claim 17 is respectfully requested.

## Claim Objections:

In the subject office action, claims 15-18 were objected to because they contained a typographical error in which they incorrectly depended on claim 11.

Applicants have amended claims 15-18 to correctly depend on claim 14.

In light of the amendments, reconsideration of these claims is requested.

#### Allowable Subject Matter::

In the subject office action, claims 3, 9, 11, 13, and 21 were deemed to be allowable if written in independent form.

## <u>Claim 3</u>

As discussed above with regards to claim 1 and it's dependent claim 3, Applicants assert that dependent claim 3 does not need to be drafted in independent form, because amended claim 1 itself has patentable subject matter. As such, claim 1 is not further amended to include the subject matter of claim 3 as suggested in the office action.

Applicants respectfully request reconsideration of the objection.

## Claims 9, 11, and 13

Because claims 9, 11, and 13 have been cancelled, the objection to them is now moot.

#### Claim 21

In the subject office action, claim 21 was deemed allowable if rewritten in independent form. In response to the suggestion, Applicants amend independent claim 14 to include subject matter of claim 21. As such, reconsideration of the rejection is requested.

## Conclusion

In view of the arguments presented herein, the application is considered to be in condition for allowance. Reconsideration and passage to issue is respectfully requested. If the Examiner has any questions or comments that would facilitate the disposition or resolution of the issues, he is respectfully requested to contact the undersigned at 609-734-6816.

Please charge a one-month extension fees to Deposit Order Account No. 07-0832.

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